



\*\*FILE\*\*ID\*\*FORWRITDU

D 7

FFFFFFFFF	0000000	RRRRRRRRR	WW	WW	RRRRRRRRR	IIIIII	TTTTTTTTTT	DDDDDDDDD	UU	UU	UU	PS
FFFFFFFFF	0000000	RRRRRRRRR	WW	WW	RRRRRRRRR	IIIIII	TTTTTTTTTT	DDDDDDDDD	UU	UU	UU	--
FF	00	00	RR	RR	WW	RR	RR	DD	UU	UU	UU	.
FF	00	00	RR	RR	WW	RR	RR	DD	UU	UU	UU	_F
FF	00	00	RR	RR	WW	RR	RR	DD	UU	UU	UU	
FF	00	00	RR	RR	WW	RR	RR	DD	UU	UU	UU	
FF	00	00	RRRRRRRR	WW	WW	RRRRRRRR	IIIIII	TT	DD	UU	UU	
FF	00	00	RRRRRRRR	WW	WW	RRRRRRRR	IIIIII	TT	DD	UU	UU	
FF	00	00	RR	RR	WW	RR	RR	DD	UU	UU	UU	
FF	00	00	RR	RR	WW	RR	RR	DD	UU	UU	UU	
FF	00	00	RR	RR	WWWW	WWWW	RR	DD	UU	UU	UU	
FF	00	00	RR	RR	WWWW	WWWW	RR	DD	UU	UU	UU	
FF	00	00	RR	RR	WWWW	WWWW	RR	DD	UU	UU	UU	...
FF	0000000	RR	RR	WW	WW	RR	RR	DDDDDDDD	UUUUUUUUUU	UUUUUUUUUU	UUUUUUUUUU	Pr
FF	0000000	RR	RR	WW	WW	RR	RR	DDDDDDDD	UUUUUUUUUU	UUUUUUUUUU	UUUUUUUUUU	--

LL	IIIIII	SSSSSSS	Pa
LL	IIIIII	SSSSSSS	Sy
LL	II	SS	Pa
LL	II	SS	Sy
LL	II	SS	Ps
LL	II	SS	Cr
LL	II	SS	As
LL	II	SS	Th
LL	II	SS	66
LL	II	SS	Tr
LL	II	SS	17
LL	II	SS	9
LLLLLLLLL	IIIIII	SSSSSSS	
LLLLLLLLL	IIIIII	SSSSSSS	

FC  
S)

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-1  
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MA

(2)	56	HISTORY : Detailed Current Edit History
(3)	87	DECLARATIONS
(4)	131	FOR\$WRITE_DU - WRITE DIRECT UNFORMATTED

0000 1 .TITLE FOR\$WRITE\_DU - entry point for FORTRAN WRITE DIRECT UNFORMATTED  
0000 2 .IDENT /1-012/ File: FORWRITDU.MAR Edit: JAW1012  
0000 3 \*\*\*\*\*  
0000 4 \*\*\*\*\*  
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0000 26  
0000 27  
0000 28 \*\*  
0000 29 : FACILITY: FORTRAN Support Library - user callable  
0000 30 :  
0000 31 : ABSTRACT:  
0000 32 :  
0000 33 : This module contains the entry point for the FORTRAN  
0000 34 : WRITE DIRECT UNFORMATTED I/O statement. It is simply  
0000 35 : a call to FOR\$IO\_BEG with bits in R0 which describe the  
0000 36 : parameter list. FOR\$IO\_BEG interprets the parameters.  
0000 37 :  
0000 38 : MAINTENANCE NOTE:  
0000 39 : The transfer vector (RTLVECTOR+ALLLBL) must have the following:  
0000 40 :  
0000 41 : .TRANSFER FOR\$WRITE\_D0  
0000 42 : .MASK FOR\$IO\_BEG  
0000 43 : BRW FOR\$WRITE\_DU+2  
0000 44 :  
0000 45 : This puts the correct mask in entry vector, that is FOR\$IO\_BEG entry mask.  
0000 46 : Furthermore this module must only use R0 and R1  
0000 47 : since any other register might not be in the entry mask for FOR\$IO\_BEG.  
0000 48 :  
0000 49 : ENVIRONMENT: User access mode; mixture of AST level or not  
0000 50 :  
0000 51 : AUTHOR: Richard B. Grove, CREATION DATE: 28-May-78  
0000 52 :  
0000 53 : MODIFIED BY:  
0000 54 : T. Hastings, 29-July-78

0000 56 .SBTTL HISTORY ; Detailed Current Edit History  
0000 57  
0000 58  
0000 59 : Edit History for Version 1  
0000 60  
0000 61 : 0-10 - Add comment about vectors. TNH 23-June-78  
0000 62 : 0-12 - Pass arg in R0, not ROR, add comments. TNH 29-July-78  
0000 63 : 1-001 - Update version number and copyright notice. JBS 16-NOV-78  
0000 64 : 1-002 - Change statement type symbols to be LUB\$K... JBS 07-DEC-78  
0000 65 : 1-003 - Change statement type symbols to be ISB\$K... JBS 11-DEC-78  
0000 66 : 1-004 - Add .. to the PSETI directive. JBS 22-DEC-78  
0000 67 : 1-005 - Add FOR\$READ\_KF, FOR\$READ\_KO, FOR\$REWRITE\_SF, FOR\$REWRITE\_SO,  
0000 68 : FOR\$READ\_IF, FOR\$READ\_IO, FOR\$WRITE\_IF, FOR\$WRITE\_IO,  
0000 69 : FOR\$READ\_XU, FOR\$REWRITE\_SU,  
0000 70 : SBL 2-May-1979  
0000 71 : 1-006 - Remove all entry points that need object time formatting,  
0000 72 : putting them in FORSENTRY\_OBJ so that we can arrange to  
0000 73 : load the format compiler only when it is needed.  
0000 74 : JBS 26-JUN-1979  
0000 75 : 1-007 - Remove entry point FORSENCODE\_MF; we will code a new module  
0000 76 : for it and FOR\$SIO\_BEG, to see how much I/O initiation time  
0000 77 : improves. JBS 02-JUL-1979  
0000 78 : 1-008 - Do likewise for FOR\$READ\_DU and FOR\$WRITE\_DU. JBS 03-JUL-1979  
0000 79 : 1-009 - Remove all entry points and add FOR\$READ\_BO; each entry  
0000 80 : point gets its own module do we can selectively load  
0000 81 : the necessary UDF and REC modules. JBS 09-JUL-1979  
0000 82 : 1-010 - Correct some typos in the references to REC and UDF levels.  
0000 83 : JBS 12-JUL-1979  
0000 84 : 1-011 - New parameter format for FOR\$SIO\_BEG. SBL 5-Dec-1979  
0000 85 : 1-012 - Change BRW FOR\$SIO\_BEG+2 to JMP G^FOR\$SIO\_BEG+2. JAW 21-Feb-1981

```
0000 87      .SBttl DECLARATIONS
0000 88
0000 89 : INCLUDE FILES:
0000 90 :
0000 91 :
0000 92 :
0000 93     $FORPAR           ; Define inter-module FORTRAN symbols
0000 94     $ISBDEF            ; Define statement type symbols
0000 95
0000 96 : EXTERNAL SYMBOLS:
0000 97 :
0000 98 :
0000 99 :
0000 100    .DSABL GBL          ; Declare all external symbols
0000 101    .EXTRN FOR$SIO_BEG   ; common I/O statement processing
0000 102    + The following references are to make sure the necessary UDF and REC
0000 103    modules are loaded. These are the routines which are called through
0000 104    the dispatch tables in FOR$DISPAT.
0000 105    -
0000 106    .EXTRN FOR$$UDF_WU0, FOR$$UDF_WU1, FOR$$UDF_WU9
0000 107    .EXTRN FOR$$REC_WD0, FOR$$REC_WD1, FOR$$REC_WD9
0000 108
0000 109
0000 110 : MACROS:
0000 111 :
0000 112 :
0000 113     NONE
0000 114 :
0000 115 : PSECT DECLARATIONS:
0000 116 :
0000 117 :
0000 118     .PSECT _FOR$CODE PIC,USR,CON,REL,LCL,SHR,EXE,RD,NOWRT,LONG
0000 119
0000 120 :
0000 121 : EQUATED SYMBOLS:
0000 122 :
0000 123 :
0000 124 :
0000 125 :
0000 126 : OWN STORAGE:
0000 127 :
0000 128 :
0000 129 :
```

0000 131 .SBTTL FOR\$WRITE\_DU - WRITE DIRECT UNFORMATTED  
0000 132  
0000 133 ++  
0000 134 FUNCTIONAL DESCRIPTION:  
0000 135  
0000 136 Initialize the FORTRAN I/O system to perform  
0000 137 a WRITE DIRECT UNFORMATTED I/O statement.  
0000 138  
0000 139 CALL FOR\$WRITE\_DU (unit.rl.v, record\_no.rl.v,  
0000 140 [, err\_adr.j.r [, end\_adr.j.r]])  
0000 141  
0000 142  
0000 143  
0000 144 INPUT PARAMETERS:  
0000 145  
0000 146 unit.rl.v logical unit number  
0000 147 record\_no.rl.v record number to WRITE  
0000 148 [err\_adr.j.r] optional ERR= address  
0000 149 [end\_adr.j.r] optional END= address  
0000 150  
0000 151 IMPLICIT INPUTS:  
0000 152  
0000 153 NONE except those used by FOR\$IO\_BEG.  
0000 154  
0000 155 OUTPUT PARAMETERS:  
0000 156  
0000 157 NONE  
0000 158  
0000 159 IMPLICIT OUTPUTS:  
0000 160  
0000 161 NONE except those left by FOR\$IO\_BEG.  
0000 162  
0000 163 COMPLETION CODES:  
0000 164  
0000 165 NONE  
0000 166  
0000 167 SIDE EFFECTS:  
0000 168  
0000 169 NONE except those of FOR\$IO\_BEG.  
0000 170  
0000 171 --  
0000 172  
0000 173 FOR\$WRITE\_DU:: .MASK FOR\$IO\_BEG  
0000 174 MOVZBL #ISBK ST TY WDU, R0 ; Statement type  
0000 175 JMP G^FOR\$IO\_BEG+2 ; branch past call mask  
0008 176  
0008 177  
0008 178 .END

50 07 0000' 0000'  
00000002'GF 17 9,

FOR\$WRITE DU  
 Symbol table

FOR\$S10_BEG	X	00
FOR\$REC_WD0	X	00
FOR\$REC_WD1	X	00
FOR\$REC_WD9	X	00
FOR\$UDF_WU0	X	00
FOR\$UDF_WU1	X	00
FOR\$UDF_WU9	X	00
FOR\$WRITE DU	00000000 RG	01
ISBK_ST_TY_WDU	= 00000007	

! Psect synopsis !

PSECT name	Allocation	PSECT No.	Attributes
. ABS	00000000 ( 0.)	00 ( 0.)	NOPIC USR CON ABS LCL NOSHR NOEXE NORD NOWRT NOVEC BYTE
_FOR\$CODE	00000008 ( 11.)	01 ( 1.)	PIC USR CON REL LCL SHR EXE RD NOWRT NOVEC LONG

! Performance indicators !

Phase	Page faults	CPU Time	Elapsed Time
Initialization	30	00:00:00.06	00:00:01.01
Command processing	126	00:00:00.62	00:00:04.09
Pass 1	126	00:00:01.24	00:00:04.51
Symbol table sort	0	00:00:00.19	00:00:00.29
Pass 2	45	00:00:00.43	00:00:01.82
Symbol table output	3	00:00:00.02	00:00:00.02
Psect synopsis output	2	00:00:00.02	00:00:00.02
Cross-reference output	0	00:00:00.00	00:00:00.00
Assembler run totals	334	00:00:02.59	00:00:11.85

The working set limit was 1050 pages.

6686 bytes (14 pages) of virtual memory were used to buffer the intermediate code.

There were 20 pages of symbol table space allocated to hold 187 non-local and 0 local symbols.

178 source lines were read in Pass 1, producing 8 object records in Pass 2.

9 pages of virtual memory were used to define 2 macros.

! Macro library statistics !

Macro library name

\$255\$DUA28:[FORRTL.OBJ]FORRTL.MLB;1	2
\$255\$DUA28:[SYSLIB]STARLET.MLB;2	0
TOTALS (all libraries)	2

Macros defined

183 GETS were required to define 2 macros.

There were no errors, warnings or information messages.

MACRO/ENABLE=SUPPRESSION/DISABLE=(GLOBAL,TRACEBACK)/LIS=LIS\$:\$FORWRITDU/OBJ=OBJ\$:\$FORWRITDU MSRC\$:\$FORWRITDU/UPDATE=(ENH\$:\$FORWRITDU)+LI

0185 AH-BT13A-SE  
VAX/VMS V4.0

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